



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,146	09/25/2003	Joseph H. Goldberg	50277-2252	6090

42425 7590 02/23/2007  
HICKMAN PALERMO TRUONG & BECKER/ORACLE  
2055 GATEWAY PLACE  
SUITE 550  
SAN JOSE, CA 95110-1089

EXAMINER
----------

VUU, HENRY

ART UNIT	PAPER NUMBER
----------	--------------

2179

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/23/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/672,146

Applicant(s)

GOLDBERG ET AL.

Examiner

Henry Vuu

Art Unit

2179

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-12, 14, 16-21, 23-32, 34 and 36-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-12, 14, 16-21, 23-32, 34, 36-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites the limitation "the input" in claim 12. The terminology "the input" has not been defined in subsequent claims in which claim 12 depends on, therefore there is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4, 5, 6, 21, 23, 24, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szabo et al. (Patent No. 5,966,126) in view of Lanning et al. (Patent No. 6,366,299) and further in view of Strasnick et al. (Patent No. 5,555,354).

Art Unit: 2179

As to claim 1, Szabo et al. teaches displaying a user interface on a display (see e.g., Fig. 10 and col. 18, lines 43 – 46; i.e., the Boolean graphical user interface split screen is displayed on a computer display), the user interface displaying a graphical representation of a search query (see e.g., Fig. 10 and col. 20, lines 25 – 30; i.e., split screen 110 is a user interface displaying a graphical representation of a search query), the graphical representation including at least a numerical preview indication of an expected size of a dataset (see e.g., Fig. 3A – Fig. 3B; i.e., datasets having associated numerical values, such as “Common Stocks” with a numerical preview of “82,004”, “NASDAQ N-Market” with a numerical preview of “13,470”, “NYSE” with a numerical preview of “3,376”, etc.) resulting from application of at least a portion of the query (see e.g., Fig. 3A – Fig. 3B and col. 18, lines 65 – 67; i.e., the application of “NASDAQ N-Market” and “NYSE” will produce a numerical preview of “16,842”, which corresponds to a portion of the entire query), but does not specifically mention prior to executing a search query to perform a search. Lanning et al. teaches prior to executing a search query to perform a search (see e.g., col. 2, lines 9 – 26; i.e., prior to executing a search query corresponds to anticipating search results before issuing a full query). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention as made to have incorporate the user interface displayed on a display, wherein the user interface displayed a graphical representation of a search query, and the numerical preview of the dataset of Szabo et al. with prior to executing a search query to perform a search of Lanning et al. because anticipating search results before issuing a full query will

Art Unit: 2179

speed up the query refinement and improve a query's probability of success (col. 2, lines 15 – 16).

Both Szabo et al. and Lanning et al. do not specifically mention the graphical preview having a thickness representative of the expected size of a dataset. Strasnick et al. teaches a graphical preview (see e.g., Fig. 1 – Fig. 2B and col. 4, lines 60 – 61; i.e., the landscape corresponds to a graphical preview) having a thickness (see e.g., Fig. 1- Fig. 2B and col. 5, lines 1 – 3; i.e., the thickness corresponds to the length of data block 110) representative of the expected size of a dataset (see e.g., Fig. 1 – Fig. 2B and col. 5, lines 4 – 9; i.e., cell 120 corresponds to a dataset, wherein data block 110 represents the size of cell 120). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the user interface displayed on a display, wherein the user interface displayed a graphical representation of a search query, and the numerical preview of the dataset of Szabo et al. as modified by the prior to executing a search query to perform a search of Lanning et al. with the graphical preview having a thickness representing the expected size of a dataset of Strasnick et al. because the graphical preview of the thickness of each column, in addition with the numerical preview of the expected size of a dataset, allows a user to distinguish the size and variation in the common data attributes among a plurality of other data attributes or datasets (see e.g., 2, lines 19 – 24).

As to claim 3, this claim is analyzed with respect to claim 1 as previously discussed above. Szabo et al. teaches displaying the user interface includes

Art Unit: 2179

displaying a first icon representing a first filter (see e.g., Fig. 10; i.e., the first icon representing a first filter corresponds to the filter icon connecting "A" and "B"), a second icon representing a second filter (see e.g., Fig. 10; i.e., the second icon representing a second filter corresponds to the filter icon connecting "C" with the output of "A" and "B"), the first filter precedes the second filter in the search query (see e.g., Fig. 10; i.e., filter icon connecting "A" and "B" precedes filter icon connecting "C" with output of "A" and "B"), and the numerical preview results from the first filter and any preceding filters (see e.g., Fig. 10; i.e., the second filter outputs a numerical preview of 10). Szabo et al. and Lanning et al. does not specifically mention the numerical preview and graphical preview results from the first filter and any preceding filters, but it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the numerical and graphical preview resulting from a first filter and any subsequent filters because the numerical and graphical preview allows a user to visually verify and distinguish the size of a portion of a query associated with the overall query.

As to claim 4, this claim is analyzed with respect to claim 1 as previously discussed above. Szabo et al. teaches displaying at least two icons representing filters (see e.g., Fig. 10 and col. 20, lines 25 – 30; i.e., depicted in window 111 of graphical user interface 110 are two filter icons) and displaying dataflow lines connection the at least two icons (see e.g., Fig. 10 and col. 4, lines 43 – 48; i.e., graphic connector lines are used for chaining or linking a plurality of icons together).

Art Unit: 2179

As to claim 5, Szabo et al. teaches displaying a user interface on a display (see e.g., Fig. 10 and col. 18, lines 43 – 46; i.e., the Boolean graphical user interface split screen is displayed on a computer display), the user interface displaying a graphical representation of a search query (see e.g., Fig. 10 and col. 20, lines 25 – 30; i.e., split screen 110 is a user interface displaying a graphical representation of a search query), the graphical representation including at least a numerical preview indication of an expected size of a dataset (see e.g., Fig. 3A – Fig. 3B; i.e., datasets having associated numerical values, such as “Common Stocks” with a numerical preview of “82,004”, “NASDAQ N-Market” with a numerical preview of “13,470”, “NYSE” with a numerical preview of “3,376”, etc.) resulting from application of at least a portion of the query (see e.g., Fig. 3A – Fig. 3B and col. 18, lines 65 – 67; i.e., the application of “NASDAQ N-Market” and “NYSE” will produce a numerical preview of “16,842”, which corresponds to a portion of the entire query), but does not specifically mention prior to executing a search query to perform a search. Lanning et al. teaches prior to executing a search query to perform a search (see e.g., col. 2, lines 9 – 26; i.e., prior to executing a search query corresponds to anticipating search results before issuing a full query). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention as made to have incorporate the user interface displayed on a display, wherein the user interface displayed a graphical representation of a search query, and the numerical preview of the dataset of Szabo et al. with prior to executing a search query to perform a search of Lanning et al. because anticipating search results before issuing a full query will

Art Unit: 2179

speed up the query refinement and improve a query's probability of success (col. 2, lines 15 – 16).

Both Szabo et al. and Lanning et al. do not specifically mention a visually distinct region located in a proximity to an icon, the region having a thickness representative of the expected size of a dataset. Strasnick et al. teaches a visually distinct region located in a proximity to an icon (see e.g., Fig. 2A; i.e., each icon represents its own spatial region, wherein each icon is visually distinct from other icons in terms of thickness and value), the region (see e.g., Fig. 1 – Fig. 2B and col. 4, lines 60 – 61; i.e., the landscape corresponds to a region) having a thickness (see e.g., Fig. 1- Fig. 2B and col. 5, lines 1 – 3; i.e., the thickness corresponds to the length of data block 110) representative of the expected size of a dataset (see e.g., Fig. 1 – Fig. 2B and col. 5, lines 4 – 9; i.e., cell 120 corresponds to a dataset, wherein data block 110 represents the size of cell 120). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the user interface displayed on a display, wherein the user interface displayed a graphical representation of a search query, and the numerical preview of the dataset of Szabo et al. as modified by the prior to executing a search query to perform a search of Lanning et al. with the graphical preview having a thickness representing the expected size of a dataset of Strasnick et al. because the thickness of each column allows a user to distinguish the size and variation in the common data attributes among a plurality of other data attributes (see e.g., 2, lines 19 – 24).



Art Unit: 2179

As to claim 6, Szabo et al. teaches displaying a user interface on a display (see e.g., Fig. 10 and col. 18, lines 43 – 46; i.e., the Boolean graphical user interface split screen is displayed on a computer display), the user interface displaying a graphical representation of a search query (see e.g., Fig. 10 and col. 20, lines 25 – 30; i.e., split screen 110 is a user interface displaying a graphical representation of a search query); the graphical representation including at least a graphical preview indication of an expected size of a data set resulting from application of at least a portion of the query (see e.g., Fig. 10; i.e., tabular format 113 of split screen 110 shows the expected size of a data set, such as member 200 having a result of 50 in tabular format 113, which corresponds to a portion of an overall query), and a shape suggestive of a funnel (see e.g., Fig. 9; i.e., the pyramid of Fig. 9 is depicted as having a shape suggestive of a funnel). Szabo et al. does not specifically mention prior to executing a search query to perform a search. Lanning et al. teaches prior to executing a search query to perform a search (see e.g., col. 2, lines 9 – 26; i.e., prior to executing a search query corresponds to anticipating search results before issuing a full query). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention as made to have incorporate the user interface displayed on a display, wherein the user interface displayed a graphical representation of a search query, and the numerical preview of the dataset of Szabo et al. with prior to executing a search query to perform a search of Lanning et al. because anticipating search results before issuing a full query will speed up the query refinement and improve a query's probability of success (col. 2, lines 15 – 16).

Both Szabo et al. and Lanning et al. do not specifically mention a visually distinct region located in a proximity to an icon, the region having a thickness representative of the expected size of a dataset. Strasnick et al. teaches a visually distinct region located in a proximity to an icon (see e.g., Fig. 2A; i.e., each icon represents its own spatial region, wherein each icon is visually distinct from other icons in terms of thickness and value), the region (see e.g., Fig. 1 – Fig. 2B and col. 4, lines 60 – 61; i.e., the landscape corresponds to a region) having a thickness (see e.g., Fig. 1- Fig. 2B and col. 5, lines 1 – 3; i.e., the thickness corresponds to the length of data block 110) representative of the expected size of a dataset (see e.g., Fig. 1 – Fig. 2B and col. 5, lines 4 – 9; i.e., cell 120 corresponds to a dataset, wherein data block 110 represents the size of cell 120). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the user interface displayed on a display, wherein the user interface displayed a graphical representation of a search query, and the numerical preview of the dataset of Szabo et al. as modified by the prior to executing a search query to perform a search of Lanning et al. with the graphical preview having a thickness representing the expected size of a dataset of Strasnick et al. because the thickness of each column allows a user to distinguish the size and variation in the common data attributes among a plurality of other data attributes (see e.g., 2, lines 19 – 24).

As to claim 21, claim 21 differs from claim 1 only in that claim 21 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25;

Art Unit: 2179

i.e., the executable instruction corresponds to “applets”) that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 1. Thus, claim 21 is analyzed as previously discussed with respect to claim 1 above.

As to claim 23, claim 23 differs from claim 3 only in that claim 23 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 3. Thus, claim 23 is analyzed as previously discussed with respect to claim 3 above.

As to claim 24, claim 24 differs from claim 4 only in that claim 24 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 4. Thus, claim 24 is analyzed as previously discussed with respect to claim 4 above.

As to claim 25, claim 25 differs from claim 5 only in that claim 25 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps

Art Unit: 2179

of claim 5. Thus, claim 25 is analyzed as previously discussed with respect to claim 5 above.

As to claim 26, claim 26 differs from claim 6 only in that claim 26 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 6. Thus, claim 26 is analyzed as previously discussed with respect to claim 6 above.

Claims 7 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szabo et al. (Patent No. 5,966,126) in view of Lanning et al. (Patent No. 6,366,299).

As to dependent claim 7, Szabo et al teaches displaying a user interface on a display (see e.g., Fig. 10 and col. 18, lines 43 – 46; i.e., the Boolean graphical user interface split screen is displayed on a computer display), the user interface displaying a graphical representation of a search query (see e.g., Fig. 10 and col. 20, lines 25 – 30; i.e., split screen 110 is a user interface displaying a graphical representation of a search query), a first graphical preview indication (see e.g., Fig. 9; i.e., layer 101 to layer 100 of the three-dimensional pyramid of Fig. 9C corresponds to the first graphical preview) that is a first visually distinct region (see e.g., Fig. 9; i.e., layer 101 to layer 100 of three-dimensional pyramid depicted in Fig. 9C is visually distinct from other layers of the pyramid) having a

Art Unit: 2179

first starting width (see e.g., Fig. 9; i.e., the first starting width corresponds to the base of pyramid in Fig. 9C, such as layer 101) and first ending width (see e.g., Fig. 9; i.e., the first ending width corresponds to the beginning of layer 100 of the three-dimensional pyramid), the first visually distinct region being located in a proximity to a first icon representing a first filter (see e.g., Fig. 9 and col. 20, lines 9 – 14; i.e., layer 101 to layer 100 represents a visually distinct region compared to other layers, wherein layer 101 to layer 100 in itself represents a first filter and an icon), and the first ending width having a width that is representative of an expected size of a first dataset (see e.g., Fig. 9 and col. 20, lines 9 – 12; i.e., layer 101 to layer 100 represents an expected size of a first dataset, where the user can click on a specific layer and view the results of that particular layer). Szabo et al. further teaches a second graphical preview indication (see e.g., Fig. 9; i.e., layer 100 to layer 99 of the three-dimensional pyramid of Fig. 9C corresponds to the second graphical preview) that is a second visually distinct region (see e.g., Fig. 9; i.e., layer 100 to layer 99 of three-dimensional pyramid depicted in Fig. 9C is visually distinct from other layers of the pyramid), having a second starting width (see e.g., Fig. 9; i.e., the second starting width corresponds to layer 100 of pyramid in Fig. 9C) and a second ending width (see e.g., Fig. 9; i.e., the second ending width corresponds to the beginning of layer 99 of the three-dimensional pyramid), the second visually distinct region being located in proximity to a second icon representing a second filter (see e.g., Fig. 9 and col. 20, lines 9 – 14; i.e., layer 100 to layer 99 represents a second visually distinct region in comparison to other layers, wherein layer 100 to layer 99 represents a

Art Unit: 2179

second icon that is a second filter) the second ending width having a width that is representative of an expected size of a second dataset (see e.g., Fig. 9 and col. 20, lines 9 – 12; i.e., layer 100 to layer 99 represents an expected size of a second dataset, where the user can click on a specific layer and view the results of that particular layer), the second visually distinct region being adjacent to the first visually distinct region (see e.g., Fig. 9; i.e., layer 100 to layer 99, corresponding to a second visually distinct region, is adjacent to layer 101 to layer 100, corresponding to a first visually distinct region), and the width of the second starting width being equal to the first ending width (see e.g., Fig. 9; i.e., the second starting width corresponds to layer 100, wherein the first ending width also corresponds to layer 100, wherein the second starting width and first ending width are equal). Szabo et al. does not specifically mention prior to executing a search query to perform a search. Lanning et al. teaches prior to executing a search query to perform a search (see e.g., col. 2, lines 9 – 26; i.e., prior to executing a search query corresponds to anticipating search results before issuing a full query). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention as made to have incorporate the user interface displayed on a display, wherein the user interface displayed a graphical representation of a search query, and the numerical preview of the dataset of Szabo et al. with prior to executing a search query to perform a search of Lanning et al. because anticipating search results before issuing a full query will speed up the query refinement and improve a query's probability of success (col. 2, lines 15 – 16).

Art Unit: 2179

As to claim 27, claim 27 differs from claim 7 only in that claim 27 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 7. Thus, claim 27 is analyzed as previously discussed with respect to claim 7 above.

Claims 8, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szabo et al. (Patent No. 5,966,126) in view of Lanning et al. (Patent No. 6,366,299) and further in view of Tuli et al. (Patent No. 6,003,034).

As to claim 8, Szabo et al. teaches displaying a user interface on a display (see e.g., Fig. 10 and col. 18, lines 43 – 46; i.e., the Boolean graphical user interface split screen is displayed on a computer display), the user interface displaying a graphical representation of a search query (see e.g., Fig. 10 and col. 20, lines 25 – 30; i.e., split screen 110 is a user interface displaying a graphical representation of a search query), but does not specifically mention prior to executing a search query to perform a search. Lanning et al. teaches prior to executing a search query to perform a search (see e.g., col. 2, lines 9 – 26; i.e., prior to executing a search query corresponds to anticipating search results before issuing a full query). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention as made to have incorporate the user interface displayed on a display, wherein the user interface displayed a

Art Unit: 2179

graphical representation of a search query of Szabo et al. with prior to executing a search query to perform a search of Lanning et al. because anticipating search results before issuing a full query will speed up the query refinement and improve a query's probability of success (col. 2, lines 15 – 16).

Both Szabo et al. and Lanning et al. does not specifically mention including at least an icon that is a group icon representing a group of filters of the search query. Tuli et al. teaches an icon that is a group icon (see e.g., Fig. 12 col. 13, lines 40 – 56; i.e., query icon 62 is a icon that can consolidate group icons 61 into a single icon to represent the overall search query) representing a group of filters (see e.g., Fig. 12 col. 13, lines 40 – 56; i.e., query icon 62 represents a group icons 61 in a consolidated form, wherein group icons 61 corresponds to a group window 3a to 3d) of a search query (see e.g., Fig. 12 col. 13, lines 40 – 56; i.e., the search query corresponds to performing various search files by dragging and dropping group icons 61 into a query window 5). Therefore it, would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate displaying a user interface on a display, displaying a graphical representation of a search query of Szabo et al. as modified by the prior to executing a search query to perform a search of Lanning et al. with the icon that is a group icon representing a group of filters of a search query of Tuli et al. because the plurality of group icons used for grouping icon filters allow the user to conserve desktop space (see e.g., col. 7, lines 9 – 11; i.e., the result of a large amount of icons displayed on the desktop can be cured by using group icons).



Art Unit: 2179

As to claim 28, claim 28 differs from claim 8 only in that claim 28 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 8. Thus, claim 28 is analyzed as previously discussed with respect to claim 8 above.

Claims 9 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szabo et al. (Patent No. 5,966,126) in view of Lanning et al. (Patent No. 6,366,299), in view of Tuli et al. (Patent No. 6,003,034), and further in view of Neale et al. (Patent No. 6,925,608).

As to claim 9, this claim is analyzed with respect to claim 8 as previously discussed above. Szabo et al. teaches a group icon can be opened (see e.g., Fig. 12, and col. 13, lines 40 – 56; i.e., group icons 61 can be consolidated into a single query icon 62, and vice versa, wherein the user can double click on query icon 62 and the overlapping group icons will appear), a group of icon corresponding to the group of filters (see e.g., Fig. 1 and col. 13, lines 40 – 41; i.e., group window 3a to 3d has a plurality of filters icons 4, wherein group window 3a to 3d can be dragged and dropped into query window 5 to represent group icons 61), but does not specifically mention dataflow lines connecting icons of the group of icons, the dataflow lines and the icons of the group of icons being arranged to indicate an order of application of filters of the group of filters. Neale

Art Unit: 2179

et al. teaches dataflow lines connecting icons of the group of icons (see e.g., Fig. 10; i.e., Boolean selector 622 represents a dataflow line connecting icons, such as pin AB 616), the dataflow lines and the icons of the group of icons being arranged to indicate an order of application of filters of the group of filters (see e.g., Fig. 10 and col. 15, line 1; i.e., the Boolean selector 622 are dataflow lines that are used to connect various pins, such as pin 616, 612, and 614, to indicate the order in which the query should be executed, represented by the query equation  $A[(B+C)(DE)]$ , wherein parenthesis and square brackets are evaluated first). Therefore it, would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate displaying a user interface on a display, displaying a graphical representation of a search query of Szabo et al. as modified by the prior to executing a search query to perform a search of Lanning et al. as further modified by the icon that is a group icon representing a group of filters of a search query of Tuli et al. with the dataflow lines connecting icons of the group of icons, the dataflow lines and the icons of the group of icons being arranged to indicate an order of application of filters of the group of filters because the Boolean graphic of arranged order of filters is used to graphically display the hierarchical Boolean combination of a search, which avoids the need for hierarchical Boolean syntax (see e.g., Fig. 10 and col. 14, lines 27 – 39).

As to claim 29, claim 29 differs from claim 9 only in that claim 29 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed,

Art Unit: 2179

causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 9. Thus, claim 29 is analyzed as previously discussed with respect to claim 9 above.

Claims 10, 12, 30, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szabo et al. (Patent No. 5,966,126) in view of Lanning et al. (Patent No. 6,366,299) and further in view of Hearst et al. (Patent No. 6,297,824).

As to claim 10, Szabo et al. teaches displaying a user interface on a display (see e.g., Fig. 10 and col. 18, lines 43 – 46; i.e., the Boolean graphical user interface split screen is displayed on a computer display), the user interface displaying a graphical representation of a search query (see e.g., Fig. 10 and col. 20, lines 25 – 30; i.e., split screen 110 is a user interface displaying a graphical representation of a search query), including at least a first icon representing a first filter (see e.g., Fig. 10 and col. 20, lines 30 – 32; i.e., the first filter icon corresponds to the icon accepting input from “A” and “B”), a second icon representing a second filter (see e.g., Fig. 10 and col. 20, lines 30 – 32; i.e., the second filter icon corresponds to the icon accepting input from “C”) associated with the search query (see e.g., Fig. 10; i.e., both icon filters are associated with an overall search query), but does not specifically mention prior to executing a search query to perform a search. Lanning et al. teaches prior to executing a search query to perform a search (see e.g., col. 2, lines 9 – 26; i.e., prior to executing a search query corresponds to anticipating search results before

Art Unit: 2179

issuing a full query). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention as made to have incorporate the user interface displayed on a display, wherein the user interface displayed a graphical representation of a search query, including at least a first icon representing a first filter, a second icon representing a second filter associated with the search query of Szabo et al. with prior to executing a search query to perform a search of Lanning et al. because anticipating search results before issuing a full query will speed up the query refinement and improve a query's probability of success (col. 2, lines 15 – 16).

Both Szabo et al. and Lanning et al. does not specifically mention including logical operator buttons, wherein each button is associated with a logical operator, and in response to a selection of the first icon and second icon and a selection of a button from the set of logical operator buttons, applying the logical operator associated with the selected button to the first and second icon. Hearst et al. teaches logical operator buttons (see e.g., Fig. 13, and col. 11, lines 49 – 54; i.e., the logical operator buttons corresponds to selection unit 222, wherein each selection unit 222 is a button used to activate an associated logic operator, such as "AND" and "NOT"), wherein each button is associated with a logical operator (see e.g., Fig. 13 and col. 11, lines 49 – 54; i.e., each selection unit 222 is associated with a corresponding logical operator, such as "AND" and "NOT"), and in response to a selection of the first icon and second icon (see e.g., Fig. 13, Fig. 15, and col. 11, lines 16 – 21; i.e., depicted in Fig. 15, the user selects 213b and 213c for inclusion of a logical operator) and a selection of a

Art Unit: 2179

button from the set of logical operator buttons (see e.g., Fig. 13, Fig. 15, and col. 11, lines 16 – 21; i.e., depicted in Fig. 15, group object 222b is activated with a symbol “•”, wherein 213b and 213c also incorporates the symbol “•”), applying the logical operator associated with the selected button to the first and second icon (see e.g., Fig. 13, Fig. 15, and col. 11, lines 16 – 21; i.e., i.e., the activation of 222b and further activating 213b and 213c while 222b is selected will produce a symbol “•” for 213b and 213c, wherein the logical operator “AND” that is associated with 222b will be applied to 213b and 213c). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate displaying a user interface on a display, displaying a graphical representation of a search query, including at least a first icon representing a first filter, a second icon representing a second filter of Szabo et al. as modified by the prior to executing a search query to perform a search of Lanning et al. with the logical operator buttons, wherein each button is associated with a logical operator, and in response to a selection of the first icon and second icon and a selection of a button from the set of logical operator buttons, applying the logical operator associated with the selected button to the first and second icon of Hearst et al. because it allows a filter or a group of filters to be activated with a particular logical operator in a variety of ways (see e.g., col. 11, lines 11 – 25).

As to claim 12, this claim is analyzed with respect to claim 10 as previously discussed above. Both Szabo et al. and Lanning et al. does not specifically mention in response to the input, displaying a textual indication of a type of logical operator associated with the first icon and second icon. Hearst et

Art Unit: 2179

al. teaches in response to the input, displaying a textual indication of a type of logical operator associated with the first icon and second icon (see e.g., Fig. 15 and col. 12, lines 33 – 36; i.e., the symbol “•” used to symbolize the activation of 213b, 213c, and 222b is also displayed with a textual indication “AND” of a type of logical operator associated with 213b and 213c). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate displaying a user interface on a display, displaying a graphical representation of a search query, including at least a first icon representing a first filter, a second icon representing a second filter of Szabo et al. as modified by the prior to executing a search query to perform a search of Lanning et al. with the displaying of a textual indication of a type of logical operator associated with the first icon and second icon of Hearst et al. because it allows a filter or a group of filters to be activated with a particular logical operator in a variety of ways (see e.g., col. 11, lines 11 – 25).

As to claim 30, claim 30 differs from claim 10 only in that claim 30 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 10. Thus, claim 30 is analyzed as previously discussed with respect to claim 10 above.

As to claim 32, claim 32 differs from claim 12 only in that claim 32 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15,

Art Unit: 2179

lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 12. Thus, claim 32 is analyzed as previously discussed with respect to claim 12 above.

Claims 11 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szabo et al. (Patent No. 5,966,126) in view of Lanning et al. (Patent No. 6,366,299), in view of Hearst et al. (Patent No. 6,297,824), and further of Ono et al. (Patent No. 5,668,966).

As to claim 11, this claim is analyzed with respect to claim 10 as previously discussed above. Szabo et al., Lanning et al., and Hearst et al. does not specifically mention a Boolean OR operator is applied when a first icon is substantially vertically aligned with the second icon, and a Boolean AND operator is applied when a first icon is substantially horizontally aligned with the second icon. Ono et al. teaches a Boolean OR operator is applied when a first icon is substantially vertically aligned with the second icon (see e.g., col. 9, lines 35 – 41; i.e., each object corresponding to an OR is placed immediately below is displayed), and a Boolean AND operator is applied when a first icon is substantially horizontally aligned with the second icon (see e.g., col. 9, lines 56 – 59; i.e., an AND is applied when the node has not next sibling on the same level). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate displaying a user interface on a

Art Unit: 2179

display, displaying a graphical representation of a search query, including at least a first icon representing a first filter, a second icon representing a second filter of Szabo et al. as modified by the prior to executing a search query to perform a search of Lanning et al. as modified by the logical operator buttons, wherein each button is associated with a logical operator, and in response to a selection of the first icon and second icon and a selection of a button from the set of logical operator buttons, applying the logical operator associated with the selected button to the first and second icon of Hearst et al. with a Boolean OR operator is applied when a first icon is substantially vertically aligned with the second icon, and a Boolean AND operator is applied when a first icon is substantially horizontally aligned with the second icon of Ono et al. because logical operators in a complex manner can be represented by a graphical data structure (see e.g., col. 10, lines 13 – 16).

As to claim 31, claim 31 differs from claim 11 only in that claim 31 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to "applets") that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 11. Thus, claim 31 is analyzed as previously discussed with respect to claim 11 above.



Art Unit: 2179

Claims 14, 16, 17, 34, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szabo et al. (Patent No. 5,966,126) in view of Hearst et al. (Patent No. 6,297,824).

As to claim 14, Szabo et al. teaches displaying a user interface on a display (see e.g., Fig. 10 and col. 18, lines 43 – 46; i.e., the Boolean graphical user interface split screen is displayed on a computer display), the user interface displaying a graphical representation of a search query (see e.g., Fig. 10 and col. 20, lines 25 – 30; i.e., split screen 110 is a user interface displaying a graphical representation of a search query), but does not specifically mention at least one or more portions of the search query are divided into one or more query steps, each of the one or more query steps corresponding to a portion of the search query, each of the one or more query steps including one or more attributes, receiving user input that specifies a value for one attribute of the one or more attributes of one query step of the one or more query steps, performing an action on a portion of the search query corresponding to the one query step, the actions being based on the value of the one attribute, and performing the action includes independently disabling the one query step without removing the components of the one query step from the query representation, thereby disabling any portion of the search query corresponding to the one query step. Hearst et al. teaches at least one or more portions of the search query are divided into one or more query steps (see e.g., Fig. 13, Fig. 15; i.e., as depicted in Fig. 15, the overall search query can be divided to include or exclude a particular step by using 222a or 222b, wherein the activation of 222a or 222b will include or exclude the step),

Art Unit: 2179

each of the one or more query steps corresponding to a portion of the search query (see e.g., Fig. 15; i.e., section unit 222a and 222b are query steps that correspond to an overall search query), each of the one or more query steps including one or more attributes (see e.g., Fig. 15 and col. 12, lines 21 – 27; i.e., the attribute corresponds to group object 220a and selection unit 222a, wherein each step has a corresponding group object and selection unit), receiving user input that specifies a value for one attribute of the one or more attributes of one query step of the one or more query steps (see e.g., Fig. 15, col. 11, lines 11 – 25 and col. 12, lines 21 – 27; i.e., receiving user input that specifies a value for the attribute of a related query step corresponds to the user entering text terms in group object 220, or clicking on selection unit 222a or 222b), performing an action on a portion of the search query corresponding to the one query step (see e.g., Fig. 15, and col. 12, lines 23 – 26; i.e., the query step indicated by the activation of selection unit 222a and query selection unit 213a results in the query step only being performed on a portion of the search query), the actions being based on the value of the one attribute (see e.g., col. 12, lines 11 – 13; i.e., when the search button 218 is invoked, the processor constructs a request for documents that includes the attributes defined by the user), and performing the action includes independently disabling the one query step without removing the components of the one query step from the query representation, thereby disabling any portion of the search query corresponding to the one query step (see e.g., Fig. 15, and col. 11, lines 11 – 16; i.e., each group object can be activated by clicking on selection unit 222, wherein clicking on an activated

Art Unit: 2179

selection unit 222 will disable the particular query step without removing the step and its text). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate displaying a user interface on a display, the user interface displaying a graphical representation of a search query of Szabo et al. with the at least one or more portions of the search query are divided into one or more query steps, each of the one or more query steps corresponding to a portion of the search query, each of the one or more query steps including one or more attributes, receiving user input that specifies a value for one attribute of the one or more attributes of one query step of the one or more query steps, performing an action on a portion of the search query corresponding to the one query step, the actions being based on the value of the one attribute, and performing the action includes independently disabling the one query step without removing the components of the one query step from the query representation, thereby disabling any portion of the search query corresponding to the one query step of Hearst et al. because it allows a filter or a group of filters to be activated and disabled with a particular logical operator in a variety of ways (see e.g., col. 11, lines 11 – 25).

As to claim 16, this claim is analyzed with respect to claim 14 as previously discussed above. Szabo et al. does not specially mention one or more query steps are arranged in an order according to a query flow, and each query step is combined with other portions of the search query using Boolean logic. Hearst et al. teaches one or more query steps are arranged in an order according to a query flow (see e.g., Fig. 15; i.e., group object 220a is arranged above group

Art Unit: 2179

object 220b in an overall query flow, which corresponds to a top down approach of execution), and each query step is combined with other portions of the search query using Boolean logic (see e.g., Fig. 15; i.e., in order to apply Boolean operator "AND" to group object 220b, the execution of group object 220a occurs first and then an "AND" operator is applied to group operator 220b). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate displaying a user interface on a display, the user interface displaying a graphical representation of a search query of Szabo et al. with one or more query steps are arranged in an order according to a query flow, and each query step is combined with other portions of the search query using Boolean logic of Hearst et al. because the group object 220a and 220b allows a filter or a group of filters to be activated and disabled with a particular logical operator in a variety of ways (see e.g., col. 11, lines 11 – 25).

As to claim 17, this claim is analyzed with respect to claim 14 as previously discussed above. Szabo et al. teaches query steps are numbered according to an order in which the query steps are applied (see e.g., Merriam-Webster Dictionary 11<sup>th</sup> Edition pg. 340 and Fig. 10; i.e., number is defined as "a distinction of word form to denote reference to one or more than one", wherein split screen 111 shows "A", "B", and "C" representing numbering, which defines "A" and "B" is executed first, and the output is applied to "C").

As to claim 34, claim 34 differs from claim 14 only in that claim 34 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15,

Art Unit: 2179

lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 14. Thus, claim 34 is analyzed as previously discussed with respect to claim 14 above.

As to claim 36, claim 36 differs from claim 16 only in that claim 36 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 16. Thus, claim 36 is analyzed as previously discussed with respect to claim 16 above.

As to claim 37, claim 37 differs from claim 17 only in that claim 37 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 17. Thus, claim 37 is analyzed as previously discussed with respect to claim 17 above.

Art Unit: 2179

Claims 18, 19, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szabo et al. (Patent No. 5,966,126), in view of Hearst et al. (Patent No. 6,297,824), and further in view of Tuli et al. (Patent No. 6,003,034).

As to claim 18, this claim is analyzed with respect to claim 14 as previously discussed above. Both Szabo et al. and Hearst et al. does not specifically mention one or more query steps are a plurality of query steps that are arranged in an order, and the order is alterable by dragging to a new location and dropping a query step selected from the plurality of query steps. Tulli et al. teaches one or more query steps are a plurality of query steps that are arranged in an order (see e.g., Fig. 1 and col. 6, lines 58 – 61; i.e., each icon 4 represents a query step that are arranged in a group order that corresponds to topics each file is related to), and the order is alterable by dragging to a new location and dropping a query step selected from the plurality of query steps (see e.g., Fig. 1 and col. 7, lines 18 – 23; i.e., the icon 4 are query steps that can be dragged and dropped into query window 5). Therefore it, would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate displaying a user interface on a display, displaying a graphical representation of a search query of Szabo et al. as modified by the at least one or more portions of the search query are divided into one or more query steps, each of the one or more query steps corresponding to a portion of the search query, each of the one or more query steps including one or more attributes, receiving user input that specifies a value for one attribute of the one or more attributes of one query step of the one or more query steps, performing an action on a portion of the search

Art Unit: 2179

query corresponding to the one query step, the actions being based on the value of the one attribute, and performing the action includes independently disabling the one query step without removing the components of the one query step from the query representation, thereby disabling any portion of the search query corresponding to the one query step of Hearst et al. with one or more query steps that are a plurality of query steps that are arranged in an order, and the order is alterable by dragging to a new location and dropping a query step selected from the plurality of query steps of Tuli et al. because the plurality of group icons used for grouping icon filters allow the user to conserve desktop space and distinguish related icon associated with a file (see e.g., col. 7, lines 9 – 11; i.e., the result of a large amount of icons displayed on the desktop can be cured by using group icons).

As to claim 19, this claim is analyzed with respect to claim 14 as previously discussed above. Both Szabo et al. and Hearst et al. does not specifically mention a group icon representing a container for, and having contained within, a group of icons representing a group of filters associated with a portion of the search query. Tulli et al. teaches a group icon representing a container for, and having contained within, a group of icons representing a group of filters associated with a portion of the search query (see e.g., Fig. 1, col. 6, lines 49 – 67 and col. 7, lines 1 – 30; i.e., group window 3a, 3b, 3c, and 3d represents a group icon with a group of filters, such as icon 4, that are dragged and dropped in query window 5 to execute a portion of a query). Therefore it, would have been obvious to one of ordinary skill in the art at the time the

Art Unit: 2179

invention was made to incorporate displaying a user interface on a display, displaying a graphical representation of a search query of Szabo et al. as modified by the at least one or more portions of the search query are divided into one or more query steps, each of the one or more query steps corresponding to a portion of the search query, each of the one or more query steps including one or more attributes, receiving user input that specifies a value for one attribute of the one or more attributes of one query step of the one or more query steps, performing an action on a portion of the search query corresponding to the one query step, the actions being based on the value of the one attribute, and performing the action includes independently disabling the one query step without removing the components of the one query step from the query representation, thereby disabling any portion of the search query corresponding to the one query step of Hearst et al. with the group icon representing a container for, and having contained within, a group of icons representing a group of filters associated with a portion of the search query of Tuli et al. because the plurality of group icons used for grouping icon filters allow the user to conserve desktop space (see e.g.; col. 7, lines 9 – 11; i.e., the result of a large amount of icons displayed on the desktop can be cured by using group icons).

As to claim 38, claim 38 differs from claim 18 only in that claim 38 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps



Art Unit: 2179

of claim 18. Thus, claim 38 is analyzed as previously discussed with respect to claim 18 above

As to claim 39, claim 39 differs from claim 19 only in that claim 39 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 19. Thus, claim 39 is analyzed as previously discussed with respect to claim 19 above.

Claims 20 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szabo et al. (Patent No. 5,966,126) in view of Hearst et al. (Patent No. 6,297,824) and further in view of Yost et al. (Patent No. 6,925,608).

As to claim 20, this claim is analyzed with respect to claim 14 as previously discussed above. Both Szabo et al. and Hearst et al. does not specifically mention a multidimensional database. Yost et al. teaches the use of a data modeling technique for On-line Analytical Processing (OLAP) or Multidimensional On-Line Analytical Processing (MOLAP) applications. Such application, for instance MOLAP, utilizes multidimensional databases (MDDB) to provide OLAP analysis. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate displaying a user interface on a display, the user interface displaying a graphical representation of

Art Unit: 2179

a search query of Szabo et al. as modified by the at least one or more portions of the search query are divided into one or more query steps, each of the one or more query steps corresponding to a portion of the search query, each of the one or more query steps including one or more attributes, receiving user input that specifies a value for one attribute of the one or more attributes of one query step of the one or more query steps, performing an action on a portion of the search query corresponding to the one query step, the actions being based on the value of the one attribute, and performing the action includes independently disabling the one query step without removing the components of the one query step from the query representation, thereby disabling any portion of the search query corresponding to the one query step of Hearst et al. with the multidimensional database of Yost et al. because the MOLAP two-tier client/server architecture enables a database to serve as both a database layer and the application logic layer, wherein the database layer is responsible for all data storage, access, and retrieval process, while the logic layer is responsible for the execution of OLAP requests. This allows the presentation layer to integrate with the application logic layer to provide an interface to the end user to view the requested OLAP analysis. This client/server architecture in turns allows multiple users to access the multidimensional database (see e.g., col. 2, lines 40 – 50).

As to claim 40, claim 40 differs from claim 20 only in that claim 40 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to “applets”) that when executed,

Art Unit: 2179

causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 20. Thus, claim 40 is analyzed as previously discussed with respect to claim 20 above.

Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szabo et al. (Patent No. 5,966,126) in view of Lanning et al. (Patent No. 6,366,299), in view of Hearst et al. (Patent No. 6,297,824), and further in view of Neale et al. (Patent No. 6,925,608).

As to claim 41, this claim is analyzed with respect to claim 10 as previously discussed above. Szabo et al., Lanning et al. and Hearst et al. does not specifically mention the logical operator buttons comprising a Boolean OR operator. Neale et al. teaches logical operator buttons comprising a Boolean OR operator (see e.g., Fig. 5; i.e., logical OR button 326). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate displaying a user interface on a display, displaying a graphical representation of a search query, including at least a first icon representing a first filter, a second icon representing a second filter of Szabo et al. as modified by the prior to executing a search query to perform a search of Lanning et al. as further modified by the logical operator buttons, wherein each button is associated with a logical operator, and in response to a selection of the first icon and second icon and a selection of a button from the set of logical operator buttons, applying the logical operator associated with the selected button to the first and second icon of Hearst et al. with the logical operator buttons comprising

Art Unit: 2179

a Boolean OR operator of Neale et al. because the logical operator button comprising an OR operator allows the user to combine selected search terms with a logical OR operator (see e.g., col. 8, lines 51 – 53).

As to claim 42, claim 42 differs from claim 41 only in that claim 42 is an apparatus claim using a computer-readable storage medium (see e.g., col. 15, lines 13 – 17) containing executable instructions (see e.g., col. 17, lines 15 – 25; i.e., the executable instruction corresponds to "applets") that when executed, causes a processor (see e.g., col. 16, line 6; i.e., processor) to perform the steps of claim 41. Thus, claim 42 is analyzed as previously discussed with respect to claim 41 above.

### ***Inquiries***

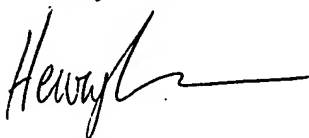
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Vuu whose telephone number is (571) 270-1048. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on (571) 272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2179

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Henry Vuu



2/8/2007

  
BA HUYNH  
PRIMARY EXAMINER